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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,594	07/24/2003	Masahiro Chida	1131-0486P	7938
2292	7590	08/10/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			ROGERS, DAVID A	
			ART UNIT	PAPER NUMBER
			2856	
DATE MAILED: 08/10/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/625,594	Applicant(s) CHIDA ET AL.	
	Examiner David A. Rogers	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040510</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities.

- a. Abstract - Change the first sentence to read as follows:

A method and apparatus for ensuring the collecting volatile constituents contained in a solid sample S such as leaf tobacco.

- b. Abstract - Change the last sentence to read as follows:

Thereafter, the depressurized canister is connected to the sample vessel, and the constituents evaporating and/or escaping from the sample are collected.

- c. Page 2, lines 13-15 - Change the last sentence to read as follows:

Thus, it is difficult to ensure the collection of volatile constituents which are different in volatility and then to analyze them accurately.

- d. Page 2, lines 18-23 - Change this sentence to read as follows:

An object of the this invention is to provide a method and apparatus for ensuring the extraction and collection of collecting volatile constituents contained in a solid sample such as leaf tobacco or flour. It is then an object of this invention to perform an analysis on the collected constituents using either an atmospheric concentration technique or a sensory evaluation, i.e. human sense of smell.

- e. Page 2, line 27 - Change this sentence to read as follows:

--a canister₁ depressurized in advance₁ is--

- f. Page 3, lines 26-27 - Change this sentence to read as follows:

--thermal decomposition of the volatile constituents does not happen, for example at an ordinary temperature--

- g. Page 5, line 21 - Change this sentence to read as follows:
--leaf tobacco, and 12 is--
- h. Page 6, line 5 - Change this sentence to read as follows:
--canister 20 is globular--
- i. Page 6, lines 9-10 - Change this sentence to read as follows:
--canister 20 is ~~inactivated~~ depressurized in advance--
- j. Page 7, line 16 - Change this sentence to read as follows:
--conventional ~~head-space~~ headspace method--

Furthermore, as this disclosure is a translation of a Japanese priority document, it is requested that the applicant ensure that there are no translation errors, grammar errors, or other issues that might cause confusion to the reader.

Appropriate correction is required.

Drawings

2. Figures 10 and 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 07 February 2001 (application 2001-030923) and 29 January 2002 (PCT/JP02/00668). It is noted, however, that applicant has not filed a certified copy of the PCT/JP02/00668 application required by 35 U.S.C. 119(b). A

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,048,404 to White, United States Patent 5,621,180 to Simon *et al.*, and United States Patent 5,863,789 to Komatsu *et al.*

White teaches that it is known to analyze the headspace of a container holding a solid sample such as from tobacco. In particular, White teaches that tobacco is placed in a container that is sealed. The headspace in the container is an inert gas such as nitrogen. The sealed container is maintained at a predetermined temperature in order to release the volatile materials contained in the tobacco into the headspace. Afterwards, the headspace is sampled, and the sample is injected into gas analyzer such as a gas chromatograph.

White does not teach the use of a thermostatic chamber to maintain the sample at a predetermined temperature. As is known in the art, headspace equilibrium is the state where the rate of molecules entering a vapor phase equals the rate at which molecules re-enter a liquid phase. Typically, equilibrium occurs at a set temperature. That is, if the temperature fluctuates then the closed member is never in state of equilibrium. Thermostatic chambers offer well-controlled environments making equilibrium possible. Furthermore, Komatsu *et al.* teaches that it is known in the art to use a thermostatic chamber to maintain the temperature of a sealed container with a solid sample (column 17, lines 48-62). From Komatsu *et al.* it is known to operate the thermostatic chamber at an “ordinary” temperature such as 25 C. The choice of a preferred temperature to operate the thermostatic chamber is a matter of design choice and can be determined based on the volatility/vapor pressure of the constituents, the type of sample, and the time required for reaching equilibrium in the headspace.

White and Komatsu *et al.* do not teach the use of an evacuated chamber for collecting the sample. Simon *et al.* teaches that it is known to use an evacuated chamber (reference item 12) (see figure 1) for the collection of samples that will be analyzed by means such as a gas chromatograph. The chamber has an associated pressure gauge (reference item 18) capable of displaying a pressure between -30 Hg to 30 psi. This would indicate that the sample chamber has the ability to be evacuated to about 100 Pa (roughly

0.0145 psi). Adapting the device shown in figure 1 to include means such as a needle/canula for extracting samples would have been obvious to one of ordinary skill. In particular, Simon *et al.* teaches that this is a preferred method as there is no solvents or adsorbents required (column 16, lines 18-23). Furthermore, the evacuated chamber is beneficial as it can extract a large volume, if not the entire volume from the headspace. This would allow the performance of multiple tests on the extract headspace gases without concern that the constituents would go back into the solid sample.

In all it would have been obvious to one of ordinary skill in the art to modify the teachings of White with the teachings of Komatsu *et al.* and Simon *et al.* in order to obtain a method and apparatus for analyzing the headspace of a container using an evacuated chamber for collecting the constituents.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Rogers whose telephone number is (571) 272-2205. The examiner can normally be reached on Monday - Friday (0730 - 1600).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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29 July 2004



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